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November 18, 2010

816.001.01(128)

Ms. Mer Wiren, P.E.
Oregon Department of Environmental Quality
Northwest Regional Water Quality
2020 SW Fourth Avenue, Ste. 400
Portland, Oregon 97201

Office of Air Waste & Toxics
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RECEIVED

**Re: DRAFT ARSENIC QUANTIFICATION PLAN
NPDES PERMIT NO. 101613
UNIVAR USA, INC., PORTLAND, OREGON**

Dear Ms Wiren:

On behalf of Univar USA, Inc. (Univar), PES Environmental, Inc. (PES) has prepared this Draft Arsenic Quantification Plan (AQP) as required by Univar's National Pollutant Discharge Elimination System (NPDES) Permit No. 101613. Specifically, the AQP is required by Schedule D (Special Conditions), Item 3, and "will detail how Univar will collect additional ambient (Willamette River), intake (natural groundwater), and effluent data including and beyond that specified in the permit to identify the source and speciation of arsenic and to quantify the mass loading of arsenic." Following your review of this Draft AQP, the plan will be modified as necessary to address your comments and a final version will be issued and implemented within two weeks of your approval.

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BACKGROUND

Water Treatment System

Univar is operating a groundwater extraction and treatment system at the Univar facility located at 3950 NW Yeon Avenue, in Portland, Oregon, consistent with the Corrective Measures Implementation (CMI) Work Plan prepared pursuant to the Amendment to the Administrative Order on Consent to Implement Corrective Action 1087-10-18-3008 (AOC Amendment) dated August 1, 2007, between the United States Environmental Protection Agency (EPA) Region 10 and Univar.

The groundwater extraction system currently extracts water from two groundwater extraction wells located on-site. The water is first treated with a sequestering agent to keep iron in the dissolved state. Next, a particulate filter is on-line whenever there is a likelihood of particulates in the water. The filter is followed by a shallow tray air stripper to remove volatile organic compounds (VOCs). The effluent is discharged to a storm sewer which leads to Outfall #18 and the Willamette River.

The system has been discharging treated groundwater under an NPDES permit since 1998. The NPDES permit was renewed in 2004 and 2010.

Based on the data Univar provided in its NPDES permit reapplication package in 2008 (for the 2010 permit renewal), the Oregon Department of Environmental Quality (DEQ) concluded that there may be a "reasonable potential" for arsenic to exceed the applicable water quality criteria at the edge of the approved mixing zone and therefore a total arsenic effluent numeric benchmark and the collection of total arsenic and total inorganic arsenic, with specified quantification limits, was added to the renewed permit. In addition, per Schedule D of the permit, Univar is required to submit this AQP to DEQ for review within 60 days of the NPDES permit issuance.

Arsenic Criterion

As described in the Fact Sheet/Permit Evaluation Report for Univar NPDES Permit No. 101613, DEQ is currently in the process of revising the human health arsenic criteria and will be proposing a criterion to better reflect the more toxic speciation's of arsenic (inorganic arsenic) using a regionally appropriate health-risk calculation method. This will result in a shift of the standard from "total" to the "inorganic" fraction, and re-evaluation to better reflect regional health risks. Given these imminent changes, DEQ is requiring Univar to:

- Ensure that the current treatment is operated at the "highest and best extent practicable"; and
- Implement an interim monitoring and source control strategy to collect the necessary data to implement the new arsenic standard during the next permit cycle.

For the purposes of DEQ's arsenic interim implementation procedure and this permit, Univar's current groundwater treatment system will be considered the "Best Available Treatment" and the permit requires Univar to continue to operate it at the "highest and best extent practicable." The permit establishes a non-regulatory numeric benchmark of 105 ug/L for assessing whether the treatment system meets the "highest and best extent practicable" requirement.

This AQP is the initial step in the interim monitoring strategy and, as described below, will provide for the phased collection and evaluation of ambient, intake, and effluent data to identify the source and speciation of arsenic, and to quantify the mass loading of arsenic. The data generated from implementing this AQP and the other monitoring required under the permit will be used by DEQ to assess compliance with the new arsenic standard once it has been issued.

PROPOSED SCOPE OF WORK

To address the requirements for the AQP outlined in the permit, Univar proposes to use a phased approach to gather the necessary data. The first phase will be to collect and review existing data and identify any data gaps. The second phase will include preparation and implementation of a sampling and analysis plan (SAP) designed to collect the additional data required to fill the data gaps identified in Phase 1.

Phase 1 - Collect Existing Data

Ambient (Willamette River)

DEQ's Reasonable Potential Analysis (RPA) Internal Management Directive¹ (IMD) suggests researching pollutant concentrations in the receiving waters by researching data summarized in the United States Geologic Survey (USGS) databases, the USEPA STORET database, and DEQ's LASAR database. Univar will research surface water arsenic concentration data from the Willamette River both upstream and downstream of Outfall #18 as well as attempt to determine background arsenic concentrations within the receiving waters, prior to the addition of any anthropogenic sources. In addition, PES will research the existence of any additional surface water arsenic studies, especially any data gathered by other applicant's for NPDES permits at or near Outfall #18 and/or the Lower Willamette Group.

Based on a brief review of existing ambient arsenic data, Univar recognizes that arsenic data collected prior to 2010 is predominantly total arsenic only and that much of the data is reported as non-detect with elevated quantification limits.

Intake (Groundwater)

Numerous environmental investigations have been conducted of surface soils, subsurface soils, and groundwater at the site. Univar will review all historical site analytical data in regards to arsenic concentrations detected at the site. In addition, Univar will attempt to obtain and review environmental groundwater data collected from locations upgradient of and/or adjacent to the site. Univar will also review USGS databases to obtain background arsenic concentrations in groundwater in the vicinity of the site.

Effluent (Water Treatment System)

Effluent samples were analyzed for total arsenic in November 2008 and total inorganic arsenic in January and February 2010 as part of the NPDES permit renewal application process and beginning in October 2010, effluent samples will be analyzed for total arsenic and total inorganic arsenic on a quarterly basis, per the current NPDES permit.

Phase 2 - Collect Additional Field Data

Based on the results of the Phase 1 data collection and evaluation, a SAP will be prepared that will:

- Summarize the Phase 1 data collection activities;
- Identify the gaps in the data and the types and quantity of data required to fill these gaps; and
- Describe sample collection and analysis procedures.

The SAP will address sampling and analysis that would be conducted to supplement the effluent monitoring required under the Permit; i.e., the SAP will address collection of ambient and/or intake data and not additional effluent data. Effluent data will be collected consistent with Schedule B of the Permit.

¹ Reasonable Potential Analysis for Toxic Pollutants Internal Management Directive. Oregon Department of Environmental Quality. September 2005.

If sufficient ambient data of arsenic levels within the Outfall #18 receiving waters (Willamette River) are not available, the SAP will propose collection of surface water samples consistent with DEQ guidance on ambient monitoring. Per DEQ's Arsenic IMD², a minimum of 10 samples is required to adequately characterize receiving waters.

If sufficient intake (groundwater) arsenic data for the site and surrounding areas is not available, the SAP will propose collection of additional groundwater samples. Univar will evaluate the locations of existing wells and determine which of these could be sampled for total and/or inorganic arsenic.

Per the water treatment system Operation and Maintenance plan, Univar collects quarterly samples of the treatment system influent to document the system's treatment effectiveness. Univar may add total and inorganic arsenic to the analyte list.

REPORTING AND SCHEDULE

Once this AQP has been reviewed, finalized, and approved by DEQ, Univar will begin implementation of the Phase 1 data collection and evaluation immediately and will submit the Phase 2 SAP within 90 days of approval of the AQP.

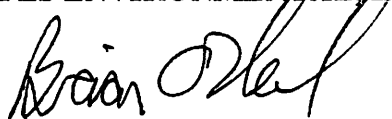
Per the NPDES permit, Discharge Monitoring Report (DMR) forms are submitted by the 15th day of the month, following the routine treatment system effluent sampling. Data generated by the approved SAP will be summarized and submitted with these monthly DMR forms.

Consistent with the Permit requirements, after two and a half years (permit mid-term), at the Pre-application Conference (to occur around January 2013), Univar and DEQ will evaluate the collected data to determine whether there is an affirmative RPA finding for the applicable inorganic arsenic criterion. The need for further actions in regards to arsenic data collection and/or treatment will be decided based on this RPA evaluation.

Thank you for your assistance with this requirement of the NPDES permit and your consideration of this AQP. Univar has begun to collect the effluent samples required in the permit. If you have any questions, feel free to contact me at (206) 529-3980.

Very truly yours,

PES ENVIRONMENTAL, INC.



Brian O'Neal, P.E.
Associate Engineer

cc: George Sylvester, Univar USA, Inc.
Holly Arrigoni, U.S. EPA Region 10

² *Interim Procedure for Addressing Naturally Occurring Arsenic in NPDES Permits*, Oregon Department of Environmental Quality Internal Management Directive. May 2010.